

U.S. Patent Application No. 09/672,328

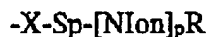
Art Unit: 1625

Page 2

AMENDMENTS TO THE CLAIMS

1. (currently amended) A ~~modified~~ pigment product comprising a pigment having attached a) at least one steric group and b) at least one organic ionic group and with at least one amphiphilic counterion, wherein said amphiphilic counterion has a charge opposite to that of said organic ionic group, and wherein said pigment comprises a blue pigment, black pigment, white pigment, brown pigment, cyan pigment, green pigment, violet pigment, magenta pigment, red pigment, yellow pigment, orange pigment, shades thereof, or a combination thereof.

2. (currently amended) The ~~modified~~ pigment product of claim 1, wherein said steric group comprises ~~has~~ the formula:



wherein X is attached to the pigment and ~~comprises at least an~~ is a substituted or unsubstituted arylene group or at least an alkylene group, Sp represents a spacer group, Nlon ~~comprises at least one~~ represents a non-ionic group, R is hydrogen, a substituted or unsubstituted or comprises an aromatic group, or a substituted or unsubstituted, branched or unbranched or an alkyl group, and p represents an integer of from 1 to 500; and wherein the spacer group is a bond or a chemical group selected from the group consisting of: CO₂, O₂C, SO₂, CO, NHCO, CONR", NR"CO₂, OCNR", NR"CONR", O, S, NR", SO₂C₂H₄, arylene, alkylene, NR"CO, NHCO₂, O₂CNH, and NCHONH, wherein R", which can be the same or different, represents a substituted or unsubstituted aryl or alkyl group.

3. (currently amended) The ~~modified~~ pigment of claim 2, wherein Nlon is a C₁-C₁₂ alkyl group or a C₁-C₁₂ alkylene oxide group.

U.S. Patent Application No. 09/672,328
 Art Unit: 1625
 Page 3

4. (currently amended) The ~~modified~~ pigment product of claim 2, wherein said non-ionic group ~~further comprises~~ is substituted with a functional group.

5. (currently amended) The ~~modified~~ pigment product of claim 2, wherein said non-ionic group is a glycol group.

6. (currently amended) The ~~modified~~ pigment product of claim 2, wherein X is an aromatic group.

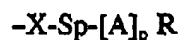
7. (currently amended) The ~~modified~~ pigment product of claim 2, wherein p is 1 to 50.

8. (currently amended) The ~~modified~~ pigment product of claim 1, wherein said steric group ~~comprises~~ has the formula:



wherein X is attached to the pigment and is a substituted or unsubstituted ~~comprises an~~ arylene group or ~~an~~ alkylene group, Sp represents a spacer group, m is an integer of from 1 to 12, p is an integer from 1 to 500, and R is hydrogen, a substituted or unsubstituted, branched or unbranched or comprises an alkyl group, or a substituted or unsubstituted or an aromatic group; and wherein the spacer group is a bond or a chemical group selected from the group consisting of: CO₂, O₂C, SO₂, CO, NHCO, CONR", NR"CO₂, OCNR", NR"CONR", O, S, NR", SO₂C₂H₄, arylene, alkylene, NR"CO, NHCO₂, O₂CNH, and NCHONH, wherein R", which can be the same or different, represents a substituted or unsubstituted aryl or alkyl group.

9. (currently amended) The ~~modified~~ pigment product of claim 1, wherein said steric group ~~comprises~~ has the formula:



U.S. Patent Application No. 09/672,328

Art Unit: 1625

Page 4

wherein X is attached to the pigment and ~~comprises at least an~~ is a substituted or unsubstituted arylene group or at least an alkylene group; Sp represents a spacer group, A represents an alkylene oxide group of from about 1 to about 12 carbons; p represents an integer of from 1 to 500; and R represents hydrogen, a substituted or unsubstituted, branched or unbranched alkyl group or a substituted or unsubstituted aromatic group wherein A can be the same or different when p is greater than 1; and wherein the spacer group is a bond or a chemical group selected from the group consisting of: CO₂, O₂C, SO₂, CO, NHCO, CONR["], NR["]CO₂, OCNR["], NR["]CONR["], O, S, NR["], SO₂C₂H₄, arylene, alkylene, NR["]CO, NHCO₂, O₂CNH, and NCHONH, wherein R["], which can be the same or different, represents a substituted or unsubstituted aryl or alkyl group.

10. (currently amended) The ~~modified~~ pigment product of claim 9, wherein X is an aromatic group.

11. (currently amended) The ~~modified~~ pigment product of claim 9, wherein X is substituted with at least one functional group.

12. (currently amended) The ~~modified~~ pigment product of claim 9, wherein X is substituted with a carboxylic group or a sulfonate group.

13. (currently amended) The ~~modified~~ pigment product of claim 9, wherein p is from 1 to 25.

14. (currently amended) The ~~modified~~ pigment product of claim 9, wherein p is from 26 to 50.

15. (currently amended) The ~~modified~~ pigment product of claim 9, wherein R is an aromatic group.

U.S. Patent Application No. 09/672,328
Art Unit: 1625
Page 5

16. (currently amended) The ~~modified~~ pigment product of claim 9, wherein m is 2, p is 44-45, R is a methyl group, and X is a benzoyl group.

17. (currently amended) The modified pigment product of claim 9, wherein m is 2, p is 22, R is a methyl group, and X is a benzoyl group.

18. (currently amended) The ~~modified~~ pigment product of claim 9, wherein m is 2, p is 44-45, R is hydrogen, and X is a benzoyl group.

19. (currently amended) The ~~modified~~ pigment product of claim 9, wherein m is 2, p is 7, R is a methyl group, and X is a benzoyl group.

20. (currently amended) The ~~modified~~ pigment product of claim 1, wherein said steric group ~~comprises~~ has the formula:



wherein X is attached to the pigment and ~~comprises at least an~~ is a substituted or unsubstituted arylene group or ~~at least an~~ alkylene group; Sp represents a spacer group, "polymer" represents a polymeric group having ~~comprises~~ repeating monomer groups or multiple monomer groups or both, optionally having at least one -X' group; R represents hydrogen, a bond, ~~or comprises at least an~~ a substituted or unsubstituted, branched or unbranched alkyl group, or a substituted or unsubstituted or at least an aromatic group; wherein X' ~~comprises at least an~~ is a substituted or unsubstituted aromatic group, arylene group, or at least an alkyl group, or alkylene group, and each X' and X can be the same or different; and the total amount of monomer groups that comprise of "polymer" is not greater than about 500 monomer repeating units, and when R represents a bond, R optionally bonds to said pigment; and wherein the spacer group is a bond or a chemical group selected from the group consisting of: CO₂, O₂C, SO₂, CO, NHCO, CONR", NR"CO₂, OCNR", NR"CONR", O, S, NR".

U.S. Patent Application No. 09/672,328

Art Unit: 1625

Page 6

SO₂C₂H₄, arylene, alkylene, NR"CO, NHCO₂, O₂CNH, and NCHONH, wherein R", which can be the same or different, represents a substituted or unsubstituted aryl or alkyl group.

21. (currently amended) An ink composition comprising a) at least one liquid vehicle; b) at least one ~~modified~~ pigment product of claim 1.

22. (original) The ink composition of claim 21, wherein said liquid vehicle is aqueous.

23. (original) The ink composition of claim 21, wherein said liquid vehicle is non-aqueous.

24. (original) The ink composition of claim 21, wherein said ink composition is an inkjet ink composition.

25. (original) The ink composition of claim 21, further comprising at least one humectant, at least one binder, at least one dye, at least one biocide, at least one penetrant, at least one surfactant, or combinations thereof.

26. (original) The ink composition of claim 21, wherein said pigment is carbon black, graphite, vitreous carbon, finely-divided carbon, activated carbon, activated charcoal, or mixtures thereof.

27. (original) The ink composition of claim 21, wherein said pigment is carbon black.

28. (cancelled)

29. (currently amended) A printing plate comprising: a substrate, a protective layer located onto said substrate, and an infrared or near-infrared radiation-absorptive layer located on said

U.S. Patent Application No. 09/672,328

Art Unit: 1625

Page 7

protective layer, wherein said radiation-absorptive layer comprises at least one ~~modified~~ pigment of claim 1.

30. (original) A method of imaging a lithographic printing plate of claim 29, comprising selectively exposing the plate to a laser output in a pattern representing an image to selectively remove or chemically modify at least the radiation-absorptive layer defining the pattern.

31. (original) The method of claim 29, further comprising subjecting the plate to a solvent capable of removing portions of the imaged layer(s) defining the pattern.